

MATERIAL SAFETY DATA SHEET

The logo for SOLARIS, featuring the word "SOLARIS" in a bold, sans-serif font. A stylized sun or planet with a crescent-like shape is positioned behind the letter "A".

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DATE PREPARED: 03/21/1996

MSDS No: 6067

UP-START® Vitamin B-1 Plant Starter with 3-10-3 Fertilizer

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: UP-START® Vitamin B-1 Plant Starter with 3-10-3 Fertilizer

Product Description: Fertilizer

MANUFACTURER:

The SOLARIS Group
of Monsanto Company
P.O. Box 5008
San Ramon, CA 94583-0808

24 HR. EMERGENCY TELEPHONE NUMBERS:

Emergency Phone 800-454-2333

PN: 5492-A

2. COMPOSITION/INFORMATION ON INGREDIENTS

	wt. %	CAS Registry #
Phosphoric acid	19.27	7664-38-2
Potassium Nitrate, Nitric Acid Potassium Salt	7	7757-79-1
Aqueous Ammonia	8.68	1336-21-6
Thiamine Hydrochloride	0.02	67-03-8
INERT INGREDIENTS	65.03	

"Inert Ingredients" is a term defined by the U.S. Environmental Protection Agency under the Federal Insecticide, Fungicide, and Rodenticide Act (40 CFR 158.153). It refers to any substance, other than an active ingredient, which is intentionally added to a pesticide product. Some inert ingredients may be hazardous chemicals, as defined by the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200). The hazards associated with these inert ingredients have been included in this document.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE:

Clear liquid

IMMEDIATE CONCERNS:

- WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING
- KEEP OUT OF REACH OF CHILDREN

POTENTIAL HEALTH EFFECTS

EYES:

The eye irritation potential of this substance has not been determined. However, it may produce slight eye irritation, e.g. discomfort, redness, swelling and blurred vision.

SKIN:

Substance may cause slight skin irritation. Avoid contact with open cuts or sores.



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INGESTION:

The systemic toxicity of this substance has not been determined. However, it should be practically non-toxic to internal organs if swallowed. Ingestion may cause irritation of the digestive tract.

INHALATION:

The systemic toxicity of this substance has not been determined. However, it should be practically non-toxic to internal organs if inhaled.

4. FIRST AID MEASURES

EYES:

Flush eyes immediately with fresh water for at least 15 minutes while holding the eyelids open. Remove contact lenses if worn. No additional first aid should be necessary. However, if irritation persists, see a doctor.

SKIN:

No first aid procedures are required. As a precaution, wash skin thoroughly with soap and water. Remove and wash contaminated clothing.

INGESTION:

If swallowed, immediately telephone a poison control center, emergency treatment center or a physician for advice. DO NOT make person vomit unless directed to do so by medical personnel. If medical advice cannot be obtained, then immediately take person and product container, with label, to an emergency treatment center.

INHALATION:

If respiratory discomfort or irritation occurs, move the person to fresh air. See a doctor if discomfort or irritation continues.

ADDITIONAL INFORMATION:

In case of medical emergencies involving this product, call day or night, (800) 457-2022 OR (800) 454-2333.

5. FIRE FIGHTING MEASURES

Flashpoint and Method: >200°F TAG CC

EXTINGUISHING MEDIA:

Material will not burn.

HAZARDOUS COMBUSTION PRODUCTS:

This material will not burn.



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FIRE FIGHTING PROCEDURES:

For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of normal products of combustion or oxygen deficiency. Read the entire document.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL:

Soak up spilled material with paper towels and discard in trash.

LARGE SPILL:

Liquid spills on floor or other impervious surfaces should be contained or diked, and should be absorbed with Oil Dry, cat litter, clay, rags or other absorbent. Collect contaminated absorbent, place in disposable container and dispose of in accordance with instructions provided under Section 13 "DISPOSAL". Thoroughly scrub floor or other impervious surface with a strong industrial type detergent solution and rinse with water.

Leaking containers should be separated from non-leakers and either the container or its contents transferred to a drum or other non-leaking container and disposed of in accordance with instructions provided under Section 13 "Disposal". Any recovered spilled liquid should be similarly collected and disposed of.

GENERAL PROCEDURES:

Observe all protection and safety precautions when cleaning up spills – see Section 8. "EXPOSURE CONTROLS/PERSONAL PROTECTION". For help with any spill, leak, fire or exposure involving this material, call day or night (800) 454-2333.

7. HANDLING AND STORAGE

GENERAL PROCEDURES:

READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL. Keep pesticide in original container. Store in a secure, preferably locked, storage area. Protect container from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

No special ventilation is necessary.



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PERSONAL PROTECTION

EYES AND FACE:

Do not get this material in your eyes. Eye contact can be avoided by wearing chemical goggles.

SKIN:

No special skin protection is usually necessary. Avoid prolonged or frequently repeated skin contact with this material. Skin contact can be minimized by wearing protective clothing. Wash thoroughly with soap and water after handling.

RESPIRATORY:

No special respiratory protection is normally required.

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200):

	EXPOSURE LIMITS		
	OSHA PEL	ACGIH TLV	ACGIH STEL
Phosphoric acid	1 mg/m ³	1 mg/m ³	3 mg/m ³
Nitric Acid Potassium Salt	None	None	None
Aqueous Ammonia			

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Appearance: Clear liquid
pH: 3.3 to 4.5
Freezing Point: 30°F
Melting Point: 0°F
Solubility in Water: Soluble
Density: 9.55 lbs./gal.
Viscosity: Same as water.

10. STABILITY AND REACTIVITY

STABLE: Yes

HAZARDOUS POLYMERIZATION: No

CONDITIONS TO AVOID

NOTES:

May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

HAZARDOUS DECOMPOSITION:

Ammonia may form upon boiling.



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INCOMPATIBLE MATERIALS:

May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

11. TOXICOLOGICAL INFORMATION

GENERAL COMMENTS:

No product toxicology data available. The hazard evaluation was based on data on the components.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA:

No data available.

ECOTOXICOLOGICAL INFORMATION:

No data available.

13. DISPOSAL CONSIDERATIONS

FOR LARGE SPILLS:

Material collected that cannot be chemically reprocessed should be disposed of in a landfill approved for disposal or in accordance with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

PRODUCT DISPOSAL:

The Solaris Group is committed to responsible environmental practices and recommends that all of the product be used up, carefully following all label directions and precautions.

If necessary to dispose of partially filled product containers, then discard in the trash.

EMPTY CONTAINER:

Do not reuse container.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

Proper Shipping Name: Not Regulated

Hazard Class: None

NA/UN Number: NONE

Packing Group: No

U.S. Surface Freight Class: Manufactured Fertilizer Compounds, NOI, Liquid



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SPECIAL SHIPPING NOTES:

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

PRODUCT CLASSIFICATION UNDER SECTION 311 OF SARA				
Acute: Yes	Chronic: No	Fire: No	Reactivity: No	Pressure Generating: No

Title III Notes: Immediate (acute) health hazard: Product is slightly irritating to the eyes.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA Regulatory: All components are on the US EPA's TSCA Inventory List.

16. OTHER INFORMATION

Hazard Rating Systems: This information is for people trained in the use of the following hazard identification systems. National Paint & Coatings Association's (NPCA) "Hazardous Materials Identification System" (HMIS) and the National Fire Protection Association's (NFPA) Hazard Diamond.

HMIS Rating

Health	1
Flammability	0
Reactivity	0
Protection	-

Key

4 = Severe

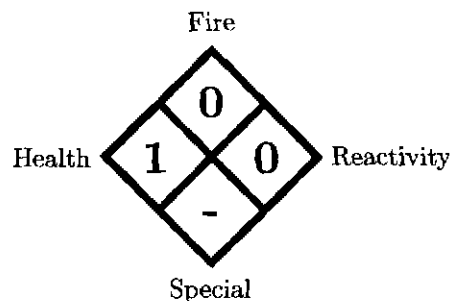
3 = Serious

2 = Moderate

1 = Slight

0 = Minimal

NFPA Rating





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Approval date: 04/26/1996

REVISION SUMMARY

New MSDS

COMMENTS:

For additional information concerning this product, call the SOLARIS Groups Consumer Helpline at 800-225-2883.

MANUFACTURER DISCLAIMER:

This Material Safety Data Sheet (MSDS) contains health, safety and environmental information for you and your employees. It does not replace the precautionary language, use directions, or the storage and disposal information found on the product label. Information contained in this MSDS will help you to prepare for emergency response and to meet community right-to-know, emergency response and reporting requirements under SARA Title III and many other laws. Emergency response agencies and health care providers will also find this additional information useful.

Use of this product is regulated by the U.S. Environmental Protection Agency (EPA) through the approved label copy. It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Monsanto Company and The Solaris Group make no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determinations as to its suitability for their purposes prior to use. In no event will Monsanto Company or The Solaris Group be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.
